NOT long ago I was amazed to hear a well-known golf constructor declare that there was but little that might be considered original in the golf construction of to-day. He asserted that our best holes were copies of time-honored and famous holes of British courses. Certainly I do not agree with him, and in my opinion some of these models which surely were grand holes a dozen years ago have completely lost caste since the introduction of far-flying balls.

Nevertheless, Great Britain provides us with some excellent types, even under present conditions, but attempts to copy them have produced holes of extreme mediocrity, and certainly a bit of originality would have been more effective. American courses fairly teem with Redans and Eden holes. A short time since when inspecting one of the latter type, I was reminded of a story.

A widow, accompanied by six children, visited the studio of a celebrated portrait painter. "We wish you to paint Father's picture," they chorused. "Delighted," replied the artist, "bring the old gentleman around for a sitting."

"It can't be done," sniffl'd the widow, "he has been dead for ten years now. We haven't even got his photograph;—but we thought we might describe him to you."

And so, one after another they described minutely Father's features and general appearance. After some weeks the portrait was completed and the family lined up before the canvass and regarded it in wonder. There was depicted every described feature; nothing was lacking, but finally the good woman exclaimed, "Yes, that's Father all right;—but how changed he seems."

As I regarded that attempted reproduction of the famous old hole at St. Andrews there were features which were similar, but the hole looked about as much like the Eden Hole as the Eden Musee.

Every great golf hole possesses many natural features which collectively make it a great hole, each dovetailing with the others and without all of them there is something lacking which spoils the whole. It is not Nature's ensemble. So why not consider the material which Nature has given us to work with to the exclusion of any attempt to distort it to a sorry imitation.

(Continued on page 69)
One of the most vital topics of the day is preparedness, and no matter whether we may be in sympathy with the doctrine so far as the policy of our nation may be involved, we must recognize the fact that no success is certain without careful and intelligent preparation.

To those whose duty it may be to devote their energies to the development and upkeep of golf courses maybe this theme of preparedness will furnish a not uninteresting tabloid sermon. Let the text be "Prepare Ye At the Time Appointed."

To those who have followed closely the production of turf, there can be no question of the desirability of seeding in the Fall rather than in the Spring. Seeds sown in the Spring months fall upon ground scarcely recovered from the chill of Winter and cluttered with embryo weeds, which although hardy enough of themselves, increase their baneful influence through the nourishment which is supplied to invigorate the grass. Then, too, the blistering droughts of Summer usually burn out the tender sprouts.

In the Fall when the weeds have exhausted themselves and the ground is still warm, grass seed finds greatest encouragement and achieves a sturdy, unmolested start which it carries over until the following Spring. Certainly in many instances Spring seeding results in no more than a thirty percent germination. Now there is nothing new in all this and any experienced greenkeeper will confirm it, but strange to say thousands of bushels of seed are scattered on ground which is not prepared to receive it.

Now let us go back to the text of preparedness and quickly to a conclusion. Assuming that you will seed this Fall you may not depend entirely upon Nature's assistance. As the estimable Colonel Roosevelt has said, "Trust In God and Take Your Own Part," and so let it be with your anticipation of Fall seeding;—Put your trust in Nature but prepare for it.

During these Summer months compost piles should be accumulating. Nearby woodlands should be searched for rich deposits of leaf-mold. If tests prove that your soil is sour, lime must be introduced to sweeten it. Suitable fertilizers should be mixed with the heaps of soil which is to be used for top dressing; and thus in many ways preparation should be made for the introduction of seed during the Fall months.

Only too frequently attempts to produce the ideal golf turf result unfortunately, and in every instance the fault may be traced to unintelligent treatment and in the great majority of cases to unpreparedness.

The Publishers take this opportunity of announcing that Mr. T. H. Riggs Miller is no longer associated with Peterson, Sinclaire & Miller, Inc.
Turf Transplanting

By J. G. Kanter

A serious problem always confronting the green committee is Turf Transplanting. It is often desired to quickly change the location of a putting green, and it is therefore necessary to transplant the turf. It is also frequently desired to place turf on some part of the course in order to avoid the delay incident to seeding.

There are many ways by which turf may be transplanted, most of which are wasteful of time, labor and money and which give very poor results at best. Careful study of this problem has developed an efficient method of doing this work and one which, if carefully followed out, will give such good results as to make it difficult to detect the fact that new turf has been laid.

The first thing to do is to form the sub-surface of the new green with the desired undulations, etc. Then cover the surface with an inch coat of finely sifted compost preferably made up of the following: for a heavy soil, one third top-soil, one third humus, and one third sharp river or bank sand; for a sandy soil, half humus and half top-soil. Humus being very highly decayed and ready for use is more desirable than even the best compost heap, but if the club has a first class compost heap on hand, which has been standing in heaps or pits for at least a year and which has been well cared for, it will be more economical to use this, and in this case the top-soil mentioned above will not be necessary, as soil is usually included in the compost pile.

After the compost has been spread over the green, secure a heavy cocoa doormat, about three feet wide and six feet long. Fasten a rope to the center of one of the narrow ends and drag and cross drag the surface with the cocoa mat until the putting green is absolutely true. Then roll with a two...
hundred pound roller, after which it is ready to be turfed.

There has always been much discussion as to the proper treatment of the turf both before and after transplanting, and whether to cut and roll back the turf, or to cut in such a size as to facilitate the handling and eliminate breakage. I believe, however, that if the method described below is carefully followed out under competent supervision, far better results will be obtained at a less cost than in any other way.

Turf should be cut after a rather heavy rain or watered the night previous, so that it will be thoroughly moist and easily workable. With a plumb-line lay off the dead center of the section of turf to be cut. Run another line at right angles to the first, also in the center. This divides the section in four accurate quarters (figure 1).

Secure as long a plank as possible, eleven and a half inches wide and two inches thick, with both the two inch sides planed smooth. A hard-wood plank of course will last much longer should the club need to do this work frequently.

Place the plank against the plumb-line and with a sharp racing iron or edging knife cut along the full length of the plank on both sides (do not cut across the strip at the narrow ends of the plank); lift the plank and place same against the outer edge of the previously cut section, and so proceed to cut the section of the turf into long parallel strips eleven and a half inches wide, running the entire length of the green.

When complete place the plank against the second plumb-line that is at right angles to the strips already cut and then cut the same as before. We have now cut the entire section into sods which are accurate eleven and one-half inch squares.

Secure four pieces of wood, one inch by two inches, two of which are to be twelve inches long and two are to be fourteen inches long. These are then fastened together so as to form a hollow square whose inside dimensions are twelve inches by twelve inches. (figure 2).

Should turf thinner than two inches be preferred, use wood of the desired width.

In order to prevent the gauge from getting out of shape the four corners should be fastened with flat iron angles as suggested in the sketch. The upper edges of the gauge should be smoothly covered with sheet metal and the nails (large head nails) or screws should be set in so that they will not catch the knife which is to be drawn over them.

We now have the green cut in eleven and one-half inch squares and a turf gauge of which the inside dimensions are twelve by twelve inches. It will be observed that the sods are half an inch smaller than the inside of the gauge. The additional width of the turf gauge is to permit the turf to slide in and out easily.

Next obtain an ordinary kitchen table, approximately three feet by six, and across the narrow end nail securely a five or six inch strip of wood, one inch thick (figure 3).

Place four men or boys around the table, as indicated in the sketch. Locate the table in such a manner that A will be working with his back to the green; this will enable B to take the sods from the carrier with a minimum of turning and will permit him to work much faster. The table should be moved from time to time with this object in view. The place from which the sods are being taken should be
kept somewhat to the right of B and
the sods should be removed in strips
running in the same direction as the
length of the table rather than across,
as this will save considerable moving
and also increase the speed.

Place the gauge on the table in front
of C, the sods are delivered to B, who
places them, bottom side up, on the
table in front of C, who places the
gauge over the sod and pushes it across
to table to A, who moves it up against
the cross board. A, who is equipped
with a turf knife or an old scythe
blade, pulls the knife toward him
across the metal top of the gauge, thus
cutting off everything over one and
one-half inches in thickness. This
gives turfs of a uniform thickness with
almost mathematical precision. D re-
move:s the gauge and returns it to C
and then takes the trimmed turf from
the table and places it in a pile or other-
wise disposes of it. This operation is
continued until all the turf is trimmed.
After carrying out this operation a few
times the men will become expert and
will work very rapidly.

The green has already been prepared
to receive the new turf, and arrange-
ments should be made to deliver the
turf to the new green so that it may be
laid at once, thus avoiding any possi-
bility of drying out.

The new green should be laid off with
a plumb-line in the same manner as the
one which was cut. Place the turf ac-
curately up to the plumb-line along its
entire length across the green, allowing
a space of one-quarter inch be-
tween each turf and thus turf the
entire green. As the turfs are all of
one size no matching is required, and it
is only necessary to bear in mind the
importance of leaving a space between
the turfs on all sides.

Beat the turf lightly with a turf-
beater, and roll with a two or three
hundred pound roller. Cover the sur-
f ace with a finely sifted compost and
seed lightly. Work the compost into
the turf and cracks by dragging the
surface with a cocoa doormat. Roll
once more rather lightly and water.
Allow the turf to remain in this state
two or three weeks and then roll and
cut regularly.

Greenkeeping Notes for the
Summer Months
By Leonard Macomber

During June, July and August
putting greens should be very
closely watched, systematically fed, and
nursed through any severe weather.
Grass suffers more from the heat than
anything else, except possibly over-
watering artificially, and during the
Summer months most courses are hard
hit by excessive wear. If turf is helped
along at the right moment and in the
right way, good putting greens can be
maintained right through the season.

Just before the hot weather is ex-
pected, give the greens a light dressing of prepared compost or humus and rub it into the existing turf with birch brooms or the backs of rakes. Weed them every Monday morning and thicken up any weak places with seed and compost mixed together.

When the greens begin to show signs of wear and tear or an unhealthy color, give them a “dusting” of compost or humus mixed with about 25 to 50 pounds per green of 400 square yards of a complete artificial fertilizer and water in. From two to four barrow loads of compost is usually the right quantity per green. This may be necessary the first of July and then another feeding advisable the first of August.

It is much better during the dry season to apply several light dressings than one heavy one.

About the first of August or the latter part of July, all greens should be raked before cutting so as to lift the stems of any crab grass or September grass when it is young and tender within reach of the mowing machine. If the plants are not allowed to ripen and go to seed, they cannot reproduce themselves as they are an annual. Sometimes crab grass establishes itself so quickly that it is necessary to remove the plants by hand or slash the crowns with a sharp knife.

Always the best thing to remember is to keep the greens healthy with a thick strong mat of turf; and the weeds will not have room to assert themselves.

Most always weeds appear when turf has suffered from wear, heat, and gotten into a semi-comatose condition.

During dry weather, water greens about twice a week and soak them thoroughly right down to the sub-soil, so that when the surface soil dries off, the roots of the grasses go down deep in search of moisture. Water six greens an evening on an eighteen-hole course.

Divide the workmen into groups and give each group a certain number of greens to take care of, offering a cash prize at the end of the season for the set of greens in the best condition right through the season. When the work on the course is slack, always turn to the compost heap and prepare further supplies for future use. Dig out any peat or leaf-mould deposits and sweeten with lime. Make stable manure composts, adding sand if the soil is of a heavy nature.

Order your Fall seed and fertilizer requirements early, and plan to give the whole course a good renovation the last of August or the first of September, as this is the best time of the year. It is also the most satisfactory season to sow down new ground.

Remember to watch the greens and nurse them along at the right moment in the right way. Never sand or lime the greens during hot, dry weather. Apply sand in already mixed and sweetened composts.

The Lido Links at Long Beach

By Peter W. Lees

The construction of new golf links all over the country goes on apace, but, up to the present time, the building of the Lido Links at Long Beach is perhaps the most ambitious and most difficult work yet undertaken.

Imagine one hundred and thirty acres or so of marsh land, and the greater part of the same an inlet of the sea, where good fishing, etc., could always be had, turned into a stretch of hills and valleys, over which there is today a fine, close carpet of turf! It seems like a fairy-tale, to say the least; but, nevertheless, it is true.

Where two years ago the fisherman, the wild duck and flower held sway, there is today a fine carpet of close turf! It seems like a fairy-tale, to say the least; but, nevertheless, it is true.

Where two years ago the fisherman, the wild duck and flower held sway, there is today a fine carpet of close turf on which it will be possible to play in a few weeks’ time.

It may be asked how we were able to get such good results all at once, as never before had there been anything attempted in this form of golf course construction, and one would naturally
think that the after treatment of the filled-in land must largely be a matter of experiment.

This was not the case, as while the course was being constructed experiments were being made with a view to determining the best after-treatment. These experiments were very important and showed the methods and materials which gave the very fine results as is shown to-day on the course itself.

The selection of the proper kind of seed, fertilizers, and humus was also determined by those experiments.

Anyone who knows anything about the sowing down of a golf course knows that the very best time to carry out this work is in the latter part of August and the first week in September.

However, owing to various delays, we were unable to sow down at this time, and the first of the seed was not put into the ground until the second week in September, and several of the greens and fairways were not seeded down until the first week in October.

As in most things, chances have to be taken at times, and we were taking a big chance here.

We were not afraid, however, and results have justified our judgment in running the risk.

The late fall turned out to be much in our favor, being mild and moist, and our latest seeding got a start right away.

As is to be expected, night frosts are common at this time of the year, but to combat them the whole of the young grass was covered over so as to protect it; very lightly, however, as care was required so as not to smother it.

Under this light covering the young plants grew strong, so that when the very cold weather set in they were able to easily withstand it.

A thick covering all over was put on for the winter, and when this was removed in early spring very little "winter-kill" had taken place, and the plants were strong and vigorous.

The foregoing seems very simple, perhaps, to many, but I can assure my brother greenkeepers I do not wish them to have the same anxiety that I have had in this seeding down at Lido, as it was always just possible that my calculations might be a trifle wrong, seeing I was practically working in the dark, and had nothing to go by.

It must, however, be clearly understood that even now all our troubles are not entirely over, as careful nursing of the young grass has to be seen to.

The proper top dressing, rolling, mowing, etc., has to be done, each one at the proper time.

Again, I must confess nature herself has been good this spring, as the copious rains have helped a lot, especially as up to date no water supply has been laid with which to sprinkle the grass.

In conclusion may I be permitted, and I do not say it in a boastful spirit, to mention that if one knows what he is up against and also knows just what to do, chances can be taken at times even in the humble occupation of the cultivation of grass, and the person who has taken these risks comes out on top. Lido has been a succession of big chances, but we are glad to say that all obstacles have been surmounted, and the course will soon be completed.

(Editor's Note.—As is well known, Peter Lees has been in entire charge of the work at Lido, and it is due to his expert knowledge that the present marvelous results have been attained. As an engineering feat, alone, Lido reaches a high rank, but the problem of the turf production has far overshadowed it. Numberless difficulties have been encountered and overcome, even though Lees has been greatly handicapped by the necessity of doing so much in the dark. Nothing quite like Lido has been attempted, and, when completed, the course will be a lasting monument to the materials used and to the skill of Peter Lees.)
Local Humus or Peat Deposits and How to Use them Safely

Occasionally the Green Committee will discover that there is a deposit of peat or humus on the club property, and many of them are inclined to immediately jump to the conclusion that here is a fine opportunity to save money in the top-dressing of the putting greens.

We cannot impress too strongly on those who are in this situation that great caution must be used before these small local deposits are used on grass. More than one green has shown the ill-effects of material of this sort which has been dug up without accurate knowledge of what was being done, and it behooves those who have these peat beds to “look before they leap.” Only the other day a case came to our attention where it was proposed to use a local deposit for a very fine new course. The material was exceedingly sour and totally unfit for use. The gentleman in charge, however, knew better than to dig up the material and use it right away. He had heard in more or less detail about the methods used by those who mine humus for commercial purposes, and therefore he planned to subject his material to several extraordinary processes, including that of kiln-drying it like brick, with a very high degree of heat, which, of course, if the heat did not entirely consume the peat, would probably have left him with a very fine grade of charcoal. Luckily, he was stopped in time by a greenkeeper who realized the mistake, and was given proper directions for taking care of the bed with a view to using it in a year or so. The result was that for a time the club will use the commercial material now, and their own later.

Few deposits of peat (which is the forerunner of humus as known commercially) are, in the natural state, fit for use. They are very apt to be sour and fibrous, brown in color, and in many cases greatly resembling water-soaked stable manure. The reason for this brown color is the fact that the peat is not yet entirely decayed, and, in this state, it is far worse than useless. If proper means are employed, most deposits may be brought to the inky-black, crumbly state which is characteristic of true humus. It will do no good to think that just because the top inch or so is in this state that some of the brown peat may be dug up, mixed with the black humus, and ground up and used. The results would be very poor if this were done. The object is to take such means as will give about six to eight inches of black humus.

This is not a very economical thing to do if the bed does not contain from half an acre to an acre, but if the bed is of this size a good grade of humus might be obtained profitably. First, the underbrush, weeds, trees, etc., must be removed from the entire area. Next the bed should be harrowed with a disc harrow. This should be done very frequently, so that all parts of the top layer will be exposed to the action of the sun and air. If the material is quite brown, no means should be employed that would tend to drain the bed, as swampy conditions are most favorable to decay of the fibrous portions. If this harrowing is kept up frequently, it will soon be noticed that the material is becoming much blacker, which is an indication that humus is being formed.

Sometimes the bed will not support the growth of small garden vegetables, and if this is the case, by no means expect it to grow grass. However, when the top has become quite black, and the material down about six inches is markedly darker than it originally was, we would recommend planting such small vegetables as onions, carrots, radishes, lettuce, cabbage, and celery. There will usually be no expense connected with growing these, as some one will usually do the necessary cultivating, etc.; for the privilege of taking away the truck. All this will improve the quality of the material.
The above hints should be carried out for at least two summer seasons—three would be better—and then the Green Committee may safely think of using the material. However, before finally using the material on a green, several tests should be made in actual growth, and it would be advisable to set apart a section of land for the purpose. Tests should be made, using one area without treatment as a control, both with grass already growing and with a newly seeded area. Obviously, if the tests are satisfactory, no fear need be had as to the results on the greens. To get a line on the quality of the humus, a test might be made along with one of the commercial varieties. If the local material does not give as good results, it is either naturally inferior or it needs more cultivation. In no case should local material be used without a careful and comprehensive test of actual growth being made.

Divot Marks

One of the first things one learns about golf is the sentence, "Please replace divots."

Many golfers replace divots, or see that their caddies do so, in a very conscientious manner; a greater number do it in a perfunctory manner, and a good number don't do it at all. When a divot is taken it is quite a matter of chance whether the scar heals quickly or remains open for a year or more.

It stands to reason that all divot marks heal quicker on rich soils than they do on poor sandy soils; also a divot taken when the soil is moist or during damp weather stands a fair chance of recovering quickly, whereas if it is taken during hot dry weather it stands a very poor chance of recovering anyway until the next growing season unless given some assistance.

The best way to heal divot marks is to fill them up with prepared soil and seed in the following manner:

Take a barrowful of dry sifted soil and mix with it three or four pounds of grass seeds specially prepared to suit the soil of the links. Apply the prepared seed and soil by dropping a handful of it into every divot mark or rabbit scrape seen, and press it down with the foot. It is incredible how quickly and thoroughly all such scars "through the green" can be healed if the work is done systematically. The best way to do the work is to send out two men with one barrowful of the soil; the barrow should be wheeled up the centre of the course, and the men should work away from it, one on either side, carrying a quantity of the soil in a bucket or other suitable vessel.

In the hot weather during the summer it would be well to use a somewhat stronger method when repairing divots, owing to the fact that the season is more or less unfavorable for the growing of grass. Instead of using the soil alone for making the seed mixture, use humus. This will germinate the seed more rapidly and exert a forcing action on it, with the result that the young plant will be better able to stand the great heat. The use of a little water when applying the mixture will also help to give good results.

Just a Reminder

The Pipe (to irascible old stickler for the Rules playing his ball out of water): "Don't forget to replace the divot, sir, will you?"
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Modern Golf Chats
(Continued from first page)

On one occasion I was going over a course which I had planned. The green committee accompanied me, and finally we stopped by one of the finest natural greens it ever has been my good fortune to find. Imagine my consternation when one of the gentlemen suggested that here was offered a magnificent opportunity to duplicate a certain green on one of America's best known courses. The green which he mentioned is a remarkably fine one and, as a matter of fact, it could have been reproduced at this spot very easily, but to me it seemed like a sacrilege to think for an instant of ruining a wonderful natural creation in an attempt to copy. In my opinion the natural green was superior to the one which was mentioned, but I doubt if it would have approached its model in excellence had it been altered.

In some of the previous Golf Chats I think it was stated that the successful golf architect must be possessed of a big imagination. It takes imagination to create, but certainly none to copy. Redfern imagines and designs, and within six months his creations are copied by New York workshops. Do you suppose that one could not discriminate between the products when they passed on the Avenue? Maybe we men could not, but certainly the ladies could. I may be wrong, but I believe that the golfers of to-day want originality. Even those who are not particularly analytical sense the difference between a purely natural hole and one which suggests the artificial, and copied holes are artificial.

Without a doubt the most impressive natural golf hole which I have ever seen exists on a yet to be developed course at Ithaca, N. Y. When I discovered it I am sure the thought that it may have resembled to some extent one of the most famous golf holes in Great Britain never occurred to me. It was magnificent and alluring in itself. Afterward its similarity to the existing hole suggested itself and I am very sorry it did, for it may hamper its development along natural lines. A purely original treatment should develop a great golf hole, but as a copy I know that it would always appear to me as a rank imitation.

The 1916 Edition of Carter's Practical Greenkeeper

is ready for distribution. Every Green Committee should have this useful handbook. A copy will be sent free to anyone interested.

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6—The weight of the super-structure and operator is evenly divided over the three Lawn Mowers. The combination of the carrying frame and a very simple draw rod mechanism makes one of the most desirable features of this machine, and it is this combination that makes absolutely positive the accurate position of the rear machine relative to the two front machines, insuring at all times, and under all conditions, the proper overlapping of the cuts. This valuable feature is found only in this machine.

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